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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,546

12/09/2003

Alexander B. Morgan

62227A

4549

109

7590

12/13/2006

THE DOW CHEMICAL COMPANY
INTELLECTUAL PROPERTY SECTION,
P. O. BOX 1967
MIDLAND, MI 48641-1967

EXAMINER

TRAN, THAO T

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,546

Applicant(s)

MORGAN ET AL.

Examiner

Thao T. Tran

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1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to the Amendment's filed on 9/21/2006.
2. Claims 1 and 3-18 are currently pending in this application. Claims 1 and 11 have been amended. Claims 19-20 have been cancelled, while their limitations have been incorporated into claims 1 and 11.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 3-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al. (US Pat. 4,639,379) in view of Ishihata et al. (US Pat. 6,362,269).

From a prior Office action:

In regards to claims 1, 3-4, and 8-15, Asai teaches an article, comprising a polymeric substrate containing a flame retardant; wherein the surface of the substrate is subjected to a plasma treatment to form a plasma-polymerized surface film containing an organosilicon compound. The polymeric substrate made of polycarbonates, styrene-acrylonitrile-butadiene copolymer, or a blend thereof (see col. 2, ln. 18-64; col. 3, ln. 3).

Asai does not teach a specific amount of the flame retardant or a specific type of flame retardant.

Ishihata discloses a resin composition comprising polycarbonate and ABS (see abstract; col. 11, ln. 1-7). The resin composition further comprises additives, such as flame retardants (see

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col. 21, ln. 8). The flame retardants include triphenyl phosphate and resorcinol bis(dixylenyl phosphate) (see col. 24, ln. 8-11).

Ishihata further teaches the flame retardant present in an amount of 0.5-15% or 0.01-2% based on 100% of the resin component. The amount of the flame retardant used differs depending upon the desired degree of flame retardancy (see col. 26, ln. 8-15).

Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the amount of the flame retardant would have been adjusted in order to obtain the desired degree of flame retardancy. It has been known within the skill in the art that too much of a flame retardant would have adversely affected the physical properties of the resin composition, while too little of a flame retardant would not have enhanced the flame retardancy of the resin composition.

With respect to the use of a phosphate flame retardant, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the flame retardant of triphenyl phosphate or resorcinol bis(dixylenyl phosphate), as taught by Ishihata, in the resin composition of Asai, for the purpose of enhancing the degree of flame retardancy, while maintaining the physical and chemical properties of the resin composition.

With respect to the flammability test, since the Asai combination teaches the same chemical composition of the polymeric composite, the polymeric composite of the combined references would inherently have the same properties such as flammability test.

In regards to claims 5-7 and 17-18, Asai further teaches the substrate is subjected to a surface pretreatment by plasma in the presence of aniline (nitrogen-containing) or nitrogen to form a crosslinked layer (see col. 7, ln. 21-26; col. 10, ln. 6-7).

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In regards to claim 16, the Asai combination does not teach the use of the composite as an enclosure for an electronic device as recited in the instant claim. However, it has been known within the skill in the art that laminates comprising a thermoplastic resin substrate with an abrasive and flame resistant coating have been used as covering of these devices. And it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the composite taught by the Asai combination as a protective covering of these device, due to its high weatherability and abrasive and flame resistance.

Response to Arguments

5. Applicant's arguments filed 9/21/2006 have been fully considered but they are not persuasive.

In response to Applicants' arguments that neither Asai nor Ishihata teaches the use of low amounts of flame retardant in combination with an organosilicate coating to achieve the claimed flammability test, it is noted that the primary reference of Asai teaches an article having a substrate containing a flame retardant and the surface of the substrate is treated to form a plasma-polymerized surface film containing an organosilicon compound. In Ishihata, a resin composition is taught containing the claimed flame retardants in an amount of 0.5-15% or 0.01-2% based on 100% of the resin composition. Note that the polymer in the substrate of Asai is polycarbonate or ABS, which are the same as the resin of Ishihata. Thus, Ishihata is used to illustrate that the claimed flame retardants present in the presently recited amounts have been taught in the prior art. And the reference of Ishihata is used to remedy Asai.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thao T. Tran
Primary Examiner
Art Unit 1711

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December 8, 2006